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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,692	11/24/2003	Ji-Hoon Lee	Q77016	3216
23373 7590 05/25/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER BOKHARI, SYED M	
			ART UNIT 2609	PAPER NUMBER
			MAIL DATE 05/25/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/718,692

Applicant(s)

LEE ET AL.

Examiner

Syed Bokhari

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

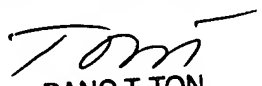
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.


DANG T. TON
SUPERVISORY PATENT EXAMINER

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 7 and 13 is/are rejected.
- 7) ☒ Claim(s) 2-6, 8-12 and 14-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 4-5, 10-11 and 15-16 are objected to under 37 CFR 1.75 because of the following informalities:

For claim 4 line 4, the occurrence of "a first threshold" refers back to "a first threshold" previously cited in lines 3-4 of claim 3, if it is true, it is suggested to applicant to change "a first threshold" to --the first threshold--.

For claim 5 lines 4-5, the occurrence of "a first threshold" and "a second threshold" should be changed to --the first threshold-- and --the second threshold--.

For claim 10, the occurrence of "a corresponding receiver" (line 2), "a first threshold" (lines 3-4) and "a second threshold" (line 4) should be changed to --the corresponding receiver--, --the first threshold-- and --the second threshold respectively--.

For claim 11, the occurrence of "a corresponding receiver" (line 2), "a first threshold" (lines 3-4) and "a second threshold" (lines 4-5) should be changed to --the corresponding receiver--, --the first threshold-- and --the second threshold-- respectively.

For claim 15, the occurrence of "a congestion control adjuster" (lines 1-2), "a corresponding receiver" (line 2), "a first threshold" (lines 3-4) and "a second threshold" (line 4) should be changed to --the congestion control adjuster--, --the corresponding receiver--, --the first threshold-- and --the second threshold-- respectively.

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For claim 16, the occurrence of "a congestion control adjuster" (lines 1-2), "a corresponding receiver" (line 2), "a first threshold" (lines 3-4) and "a second threshold" (lines 4-5) should be changed to -- the congestion control adjuster--, --the corresponding receiver--, --the first threshold-- and --the second threshold-- respectively.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim1, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aweva et al. (US 6,894,974 B1) in view of Hayakawa (USP 5,042,029).

For claim 1, Aweva et al. discloses a communication system, comprising: a transmitter for transmitting one or more data packets; at least one receiver connected to the transmitter, for receiving the data packets and transmitting to the transmitter one or more response signals in response to the received data packets (see column 4 lines 19-28 in Detailed Description); a multiplexer for multiplexing and transmitting to the transmitter the response signals transmitted from the receiver and transmitting the transmitted data packets from the transmitter to a corresponding receiver (see column 5 lines 53-65 in Detailed Description); the multiplexer provided with a queue status monitor for monitoring a queue status of at least one of the transmitted data packets and the response signals (see column 3 lines 39-48 in Detailed Description). Aweva et al. discloses all the subject matter of the claimed invention with the exception of a congestion control adjuster for instructing the receiver to hold or compress the response signals based on the monitored queue status. Hayakawa from the same or similar field of endeavor teaches of a congestion control adjuster for instructing the receiver to hold or compress the response signals based on the monitored

queue status (see paragraph 2 lines 16-34 in Summary of the Invention). It would have been obvious to one of ordinary skill in the art at the time of invention was made to use of the same means for a congestion control adjuster for instructing the receiver to hold or compress the response signals based on the monitored queue status as taught by Hayakawa in the communication network of Aweva et al. A congestion control adjuster for instructing the receiver to hold or compress the response signals based on the monitored queue status as taught by Hayakawa can be modified/implemented in the communication arrangement of Aweva et al. by adding two units (i.e. an acknowledgement data buffer unit and a timer unit) in the acknowledgement data transmitter portion of the receiver. The buffer unit will store the acknowledgement data during the holding time introduced by the timer unit as per instruction received from the multiplexer or gateway. The motivation for adding a buffer and a timer unit in the acknowledgement transmitter portion of the receiver is to store the acknowledgement traffic during the holding period to avoid the congestion.

For claim 13, Aweva et al. discloses a communication method in which a receiver receiving data packets from a transmitter transmits to the transmitter response signals corresponding to the data packets (see column 4 lines 52-59 in Detailed Description); monitoring a queue status of at least one of the data packets and the response signals (see column 3 lines 39-42 in Summary of the Invention) and compressing the response signals for a second predetermined period of time if

the compression of the response signals instructed. This method of signal compression is well known in the art for eliminating the inefficient use of network bandwidth cause by numerous acknowledgement transmitted by the receiver. Aweva et al. discloses all the subject matter of the claimed invention with the exception of method of instructing the receiver to hold or compress the response signals based on the monitored queue status and holding the response signals for a first predetermined period of time if the holding of the response signals is instructed. Hayakawa from the same or similar field of endeavor teaches of method of instructing the receiver to hold or compress the response signals based on the monitored queue status and holding the response signals for a first predetermined period of time if the holding of the response signals is instructed (see column 2 lines 30-34 in Summary of the Invention) It would have been obvious to one of ordinary skill in the art at the time of invention was made to use the same method instructing the receiver to hold or compress the response signals based on the monitored queue status and holding the response signals for a first predetermined period of time if the holding of the response signals is instructed as taught by Hayakawa in the communication network of Aweva et al. Instructing the receiver to hold or compress the response signals based on the monitored queue status and holding the response signals for a first predetermined period of time if the holding of the response signals is instructed taught by Hayakawa can be modified/implemented in the communication arrangement of Aweva et al. by implementing the codes of required functional

steps with the timer and the buffer units at receiver and the multiplexer. The motivation for implementing the steps in the receiver to hold or compress the response signals for a first predetermined period of time as taught by Hayakawa in the communication network of Aweva et al. is to avoid congestion at multiplex cause by numerous acknowledgements transmitted by the receiver.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hadi Salim et al. (USP 6,535,482 B1) in view of Hayakawa (USP 5,042,029).

For claim 7, Hadi Salim et al. discloses A communication system, comprising: at least one transmitter for transmitting one or more data packets; at least one receiver belonging to a private network and connected to the transmitter, for receiving the data packets and transmitting to the transmitter one or more response signals in response to the received data packets (see column 2 lines 47-52); a gateway for arbitrating a communication protocol between the transmitter and the private network, the gateway provided with a queue status monitor for monitoring a queue status of at least one of the transmitted data packets and the response signals (see column 2 lines 53-58 in Summary of the Invention). Hadi Salim et al. discloses all subject matter of the claimed invention with the exception of a congestion control adjuster for instructing the receiver to hold or compress the response signals based on the monitored queue status. Hayakawa from the same or similar field of endeavor teaches of a congestion control adjuster for instructing the receiver to hold or compress the response

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signals based on the monitored queue status (see column 2 and lines 16-34 in Summary of the Invention). It would have been obvious to one of ordinary skill in the art at the time of invention was made to use of the same means for a congestion control adjuster for instructing the receiver to hold or compress the response signals based on the monitored queue status as taught by Hayakawa in the communication network of Hadi Salim et al. The means for a congestion control adjuster for instructing the receiver to hold or compress the response signals based on the monitored queue status as taught by Hayakawa can be modified/implemented in the communication arrangement of Hadi Salim et al. by adding two units (i.e. an acknowledgement data buffer unit and a timer unit) in the acknowledgement data transmitter portion of the receiver. The buffer unit will store the acknowledgement data during the holding time introduced by the timer unit as per instruction received from the multiplexer or gateway. The motivation for a buffer unit and a timer unit in the acknowledgement transmitter portion of the receiver is to store the acknowledgement traffic during the holding period to avoid the congestion.

Allowable Subject Matter

7. Claims 2-6, 8-12 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USP 6,215,769 B1 (Ghani et al.), USP 6,542,931 B1 (Le et al.), USP 4,799,215 (Suzuki), USP 6,901,593 (Aweya et al.) and USP 5,781,532 (Watt).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed Bokhari whose telephone number is (571) 270-3115. The examiner can normally be reached on Monday through Friday from 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on (571) 272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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